The NEW normal... is NOT new
Exponential Technology Update
1. Computer speed/cost
2. Machine learning/deep learning
3. Internet Of Things (IOT)
4. Robotics
5. Augmented reality
6. Virtual reality
7. Genomic decoding and recoding
8. Synthesized medicine
John Spence

making the very complex... awesomely simple

1 The accelerating pace of change...

Agricultural Revolution: 8000 years
Industrial Revolution: 120 years
Light-bulb: 90 years
Moon landing: 22 years
World Wide Web: 9 years
Human genome sequenced: 2045

2 ...and exponential growth in computing power...

Computer technology, shown here climbing dramatically by powers of 10, is now progressing more each year than it did in its entire first 50 years.

3 ...will lead to the Singularity

Apple II: At a price of $1,298, the compact machine was one of the first mass-market popular personal computers

Power Mac G4: The first personal computer to deliver more than 1 trillion floating-point operations per second

2045: Surpasses brainpower equivalent to that of all human brains combined

Surpasses brainpower of human in 2023

2023

2015

1900

COMPUTER RANKINGS

By calculations per second per $1,000

Analytical engine: Never fully built, Charles Babbage’s invention was designed to solve computational and logical problems

Colossus: The electronic computer, with 1,500 vacuum tubes, helped the British crack German codes during WW II

UNIVAC I: The first commercially marketed computer, used to tabulate the U.S. Census, occupied 543 cu. ft.

Apple II: At a price of $1,298, the compact machine was one of the first mass-market popular personal computers

Power Mac G4: The first personal computer to deliver more than 1 trillion floating-point operations per second
D-Wave 2 system: 1,097 Qubits = 3,600 Super Computer / 100M laptop
ACTIVITY SUMMARY
All metrics as of October 31, 2016

Vehicles on public roads:
- 24 Lexus RX450h SUVs
- 34 prototype vehicles

Miles driven*:
- Autonomous mode: 2,230,275 miles
- Manual mode: 1,309,634 miles
- Avg autonomous miles per week: 24K - 26K

*Total miles driven since the start of our project in 2009. “Autonomous mode” means the software is driving the vehicle, and test drivers are not touching the manual controls. “Manual mode” means the test drivers are driving the car.

2,230,275 = 1
... one-third of jobs will be replaced by software, robots, and smart machines by 2025
Printers alert your computer that ink needs replacing.

Elevators notifying facilities of a fault in the system wirelessly.

Sensors that call emergency services if an elderly person falls at home.

Air Con/Heating controlled centrally to ensure building runs efficiently.

Sensors on factory floors to control equipment.

Centralised monitoring of Street lighting/water mains.
• 50 billion connected IOT devices
• 27 billion M2M connections
• 250 million connected vehicles
• 100 million wearable devices
• 20 million pieces of clothing
• Only 0.1% currently connected
Reality Check
Knowing – Doing
1-10
“The rate of internal innovation must exceed the rate of external innovation”
(T + C + ECF) x DE = Success
The Four – I’s

- Ignorance
- Inflexibility
- Indifference
- Inconsistency
How to avoid the Four I’s

- Aggressive external market focus
- Aggressive customer focus
- Keep the “Main Things” the main things
- Bullish on knowledge sharing and learning
- Teamwork is mandatory – not optional
- Passion and commitment at all levels
- Foster a healthy paranoia
- Revel in change
Emotional Response to Perceived Negative Change

Active

Emotional Response

Stability

Immobilization

Denial

Anger

Bargaining

Depression

Testing

Acceptance

Passive

Time
Managing Positive Responses to Change

Uninformed Optimism

Informed Pessimism

Checking Out

Hopeful Realism

Informed Optimism

Completion

TIME

PESSIMISM
Irresistible case for change

Vision of the new future

Plan for small wins

Guiding coalition

Empower others

Sense of urgency

Based on Kotter’s 8 steps of change
1,300,000 interviews: **Basic 4 + 1**

- **Focused Goal Setting**
- **High Levels of Trust**
- **Strong Accountability**
- **Robust Communications**

**4 + 1 Formula**

**Celebrate**

**Wow**  **No Surprises**  **Cheer**
The key elements of a winning culture

- Positive Culture
- Fun
- Results
- Family
- Friends
- Meaning
- Pride
- Praise
- Freedom
- Fair
1. Fair Pay (10% +/-)
2. Meaningful Work
3. Cool Colleagues
4. Winning Culture
5. Personal/Professional Growth
6. Leader I Respect/Admire
What are the top 5 characteristics you look for in an Ideal Team Member?

Workshop page 8
Direction
Measurements
Competence
Communication
Mutual Accountability
Discipline
10 Key Team Competencies:

1. Setting clear, specific and measurable goals
2. Making assignments extremely clear and ensuring required competence
3. Establishing accountability for high performance across the entire team
4. Running effective team meetings
5. Building strong levels of trust
6. Establishing open, honest and frank communications
7. Managing conflict effectively
8. Creating mutual respect and collaboration
9. Encouraging risk-taking and innovation
10. Engaging in ongoing team building activities
Moments Of Truth
The Evergreen Project

10 year study of 160 top companies

40 distinct industries

200 management practices

Winners, climbers, tumblers, losers

Winners had an average Total Return to Shareholders of 945%...

The Losers only averaged a TRS of 62%

From: What (really) Works by Joyce, Nohria, Roberson
The Four Primary Practices:

1. A sharply focused, clearly communicated and well-understood strategy for growth.
2. Flawless operational execution that consistently delivers the value proposition.
3. A performance-oriented culture that does not tolerate mediocrity.
4. A fast, flexible, flat organization that reduces bureaucracy and simplifies work.
The Secondary Management Practices:

• Talent = find and keep the best people
• Key leaders show commitment and enthusiasm for the business
• Embrace strategic innovation
• Master the power of partnerships

Score yourself on the 1–10 scale for all eight practices on page 12
Based on everything we have covered, what are FIVE specific and measurable action steps you can take to improve the success of your company?
If you have any questions please send a note to me
john@johnspence.com

My twitter address is: @awesomelysimple

Connect with me on LinkedIn and Facebook

For more ideas and insights from my perspective sign up for my blog
www.blog.johnspence.com

To expand on the ideas presented today and to access additional resources, visit the client portal created for you to use and share
Johnspence.com/eosingapore